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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/615,117

07/13/2000

David Thomas

TI-29250

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23494

7590

10/03/2003

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EXAMINER

GENCO, BRIAN C

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/615,117

Applicant(s)

THOMAS, DAVID

Examiner

Brian C Genco

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 and 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 16-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species of the claimed invention: Species I: Figs. 5-8; Species II: Fig. 9.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 22 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Robert D. Marshall on September 11, 2003 a provisional election was made without traverse to prosecute the invention of Species II, claims 16-21 and 23 as well as generic claim 22. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-15 and 24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Europe on July 19, 1999. It is noted, however, that applicant has not filed a certified copy of the European application as required by 35 U.S.C. 119(b).

Drawings

Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 16, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by (USPN 5,227,889 to Yoneyama et al.).

In regards to claim 16 Yoneyama et al., herein Yoneyama, discloses an image processing apparatus, comprising:

a digital signal processor for processing a sequence of image frames collectively forming a motion picture, wherein the digital signal processor is arranged to:

determine a vertical alignment axis for each frame of the sequence from an analysis of the data content of that frame (e.g., column 4, lines 1-29; Figs. 2 and 6);

apply a rotational transform to each frame to map the vertical alignment axis determined by the analysis onto a fixed alignment axis of the frame (e.g., column 4, lines 30-57; Figs. 2 and 6); and

output the sequence of image frames thus transformed to compensate for vertical misalignment of the data content of the frames (output 7 of Fig. 2; column 2, lines 37-63).

In regards to claim 22 Yoneyama discloses an image processing method, comprising:

receiving a sequence of image frames taken by a camera (e.g., Fig. 2; column 2, lines 37-63);

determining a vertical alignment axis for each frame of the sequence (e.g., column 4, lines 1-29; Figs. 2 and 6);

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applying a rotational transform to each frame through an angle determined from misalignment between a vertical alignment axis related to image content and a fixed alignment axis of the frame (e.g., column 4, lines 30-57; Figs. 2 and 6); and

outputting the sequence of image frames thus transformed to compensate for vertical misalignment of the image content of the frames (e.g., Fig. 2; column 2, lines 37-63).

In regards to claim 23 see Examiners notes on the rejection of claim 22.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 5,227,889 to Yoneyama et al.).

In regards to claim 17 Yoneyama discloses the digital signal processor arranged in the housing and operatively connected on the output of the camera to apply rotational

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transformations to frames obtained by the camera, thereby to compensate for vertical misalignment of the data content of the frames (e.g., Fig. 2).

Yoneyama discloses a rectangular camera as shown in Figs. 2 and 6, however does not explicitly disclose that the camera is shaped and dimensioned to allow the device to be hand held. Examiner notes that it is implied that it be handheld in that in the background section Yoneyama discloses image fluctuation prevention devices cannot correct for image slant and thus reproduced images are inclined and cannot be appreciated if the user takes pictures while walking. This then implies that the prior art cameras are handheld since the user is walking with it. Further, Yoneyama discloses an embodiment wherein there includes both a fluctuation detector element 12 and a slant detector element 8 as shown in Fig. 8. This is done in order to overcome the prior art cameras shortcomings wherein since this embodiment is based on prior art cameras, wherein as discussed above the prior art cameras are implied to be shaped and dimensioned to allow the device to be hand held, this would further imply that the embodiment of the invention shown in Fig. 8 is also hand held. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have made Yoneyama's camera shaped and dimensioned to allow the device to be hand held as implied by Yoneyama's disclosure.

Yoneyama discloses a photoelectric converter element 2 as seen in Fig. 2, wherein Yoneyama does not explicitly disclose nor preclude that the photoelectric converter 2 include an array of light sensitive elements for obtaining respective pixels of an image frame. It is extremely well known in the art to use CCD or CMOS image sensors for photoelectric converters in order to have a readily manufacturable image sensor.

Official notice is taken. Therefore it would have been obvious to one skilled in the art at the time of the invention to have made photoelectric converter 2 a CCD or CMOS image sensor in order to have a readily manufacturable image sensor.

In regards to claim 18 Yoneyama only discloses that the image signals are output, but does not disclose how or to what they are output. It is extremely well known in the art to use memory cards in conjunction with video cameras so as to provide compact and easy data portability in a format that is easily manipulated for further image processing if necessary.

Official notice is taken. Therefore it would have been obvious to one skilled in the art at the time of the invention to have made output 7 in Yoneyama's invention be supplied to a memory card in order to provide compact and easy data portability in a format that is easily manipulated for further image processing if necessary.

In regards to claim 19 see Examiners notes on the rejection of claim 18. Examiner notes that the claimed output connected to the data carrier is inherent in the portability of a memory card, i.e. the ability to easily transport image data from a camera to another device through physically taking the memory card with image data stored on it from a camera and inserting it into the other device. As such the input pins of the memory card are also output pins.

In regards to claim 20 see Examiners notes on the rejection of claim 16. Note that the input stage is the photoelectric converter 2 and the digital signal processor is connected between the input stage and the output 7 as shown in Fig. 2. Yoneyama discloses an output 7 in Fig. 2 however does not explicitly disclose nor preclude that the output be a display. It is extremely well known and established in the art to provide displays both integrally formed with the camera and externally connected to the camera so as to provide the user feedback on images currently

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being taken so that a user can verify the scene being imaged. Official notice is taken. Therefore it would have been obvious to one skilled in the art at the time of the invention to have added a display to the output 7 of Yoneyama's invention in order to provide the user feedback on images currently being taken so that a user can verify the scene being imaged.

In regards to claim 21 Yoneyama discloses an image processing apparatus according to claim 16, further comprising:

a receiver for receiving sequences of image frames (e.g., the connection between the photoelectric converter and the rest of the circuitry shown in Fig. 2);

the digital signal processor arranged to receive sequences of image frames from the receiver (e.g., Fig. 2); and

a transmitter for outputting a sequence of image frames transformed by the image processing apparatus to compensate for vertical misalignment of the data content of the frames received at the input stage (e.g., It is extremely well known in the art to provide cameras at remote locations wherein it is also well known in the art to provide a transmitter so as to send image information to a location remote from the camera. Official notice is taken. Therefore it would have been obvious to one skilled in the art to have added a transmitter at the output 7 of Yoneyama's invention in order to enable the camera to send image information to a location remote from the camera).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian C. Genco who can be reached by phone at 703-305-7881 or

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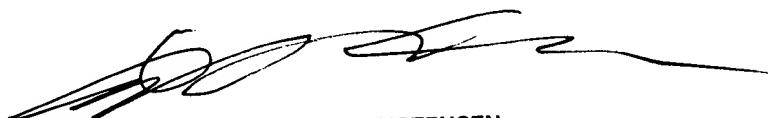
by fax at 703-746-8325. The examiner can normally be reached on Monday thru Thursday 7:30am to 4:30 pm and every other Friday 7:30am to 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center 2600 customer service office whose telephone number is 703-306-0377.

Brian C Genco
Examiner
Art Unit 2615

September 25, 2003



ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600